

Amendments to the Drawings:

Please replace FIGs. 1 and 2 with the amended FIGs. 1 and 2. In FIG. 1, block 114 is added. In FIG. 2, "signalsare" has been changed to "signals are," and "defective pixel signals" has been changed to "defective pixels."

REMARKS

The Examiner's Action mailed on November 17, 2005 has been received and its contents carefully considered. In this Amendment, the Applicant has amended claims 1, 3-5, 8, 10, and 11. Claims 2 and 9 are deleted. Dependent claims 15 and 16 are added to further protect the invention. Claims 1, 3-8, and 10-16, of which claims 1 and 8 are independent, are now pending in the application. For at least the following reasons, it is submitted that this application is in condition for allowance.

The Examiner has objected the drawings for lack of illustration of features recited in claims 2-4, 9-11, 13 and 14. FIG. 1 has been amended to illustrate the liquid crystal display in a scaler as claimed in claims 13 and 14, claims 2 and 9 have been cancelled, and claims 3, 4, 10 and 11 have been amended so as to be illustrated in the drawings. The objections to the drawings therefore no longer are applicable and accordingly should be withdrawn.

The Examiner has objected claims 10 and 11 because "VA" and "TN" are not spelled out. Claims 3 and 4 have been amended to spell out "VA" and "TN". Therefore the objections no longer are applicable and accordingly should be withdrawn.

The Examiner rejected claims 1-7 under 35 USC 112, second paragraph. Claim 1 has been amended to clarify the pixel signal referred to in original line 12 (now in step (d) is the pixel signal input in step (c), so that the basis for this rejection therefore no longer is applicable and accordingly should be withdrawn.

Claims 1, 5, 7 and 8 have been rejected under 35 U.S.C. § 102(b) as being unpatentable by *Baldi* (U.S. Patent No. 5,708,451). However, independent claims 1

and 8 have been amended for improved clarity, and it is submitted that amended claims 1, 5, 7 and 8 are patentable over *Baldi* for at least the following reasons.

Applicant's amended claim 1 recites:

"Claim 1 (Currently amended): A method for repairing defective pixels of a liquid crystal display panel wherein the method comprises at least the steps of:

(a) obtaining the location of a defective pixel on the liquid crystal display;

(b) inputting a pixel signal, wherein the pixel signal further comprises a pixel brightness signal used to control a pixel to have a brightness according to the pixel signal;

(c) replacing the pixel brightness signal with a default brightness signal if the pixel signal is used to be inputted to the defective pixel, wherein the default brightness signal is used to control the pixel to be substantially completely dark; and

(d) outputting the pixel signal inputted to the defective signal in step (c) to repair the defective pixel."

(*Emphasis added*)

Baldi discloses:

"According to a different embodiment, the pixel correction factors stored in a nonvolatile memory array are proportional to the intensity of the light signal picked up by a photocell suitably placed in front of the FED undergoing testing, while the pixels are sequentially excited (scanned one by one) by a biasing signal of a fixed preset level. In this way, the correction factor that will be applied to each individual pixel is directly proportional to the measured pixel luminance. Therefore it is possible to correct the compounded effects of the disuniformities of the cathode structure and of the possible disuniformities of the light emitting phosphor layer of the display, that is of the anode structure which also comprises the layer or layers of phosphors."

(See col. 7, lines 1-6) (*Emphasis added*)

The Examiner regards the "correction" introduced in the incoming video signal in *Baldi*'s FIG. 5 is the replacement of its brightness signal. However, *Baldi*'s pixel correction factors stored in a nonvolatile memory array are proportional to the intensity

of the light signal picked up by a photocell suitably placed in front of the FED
undergoing testing. Therefore, *Baldi* does not disclose “replacing the pixel brightness
signal with a default brightness signal if the pixel signal is used to be inputted to the
defective pixel, wherein the default brightness signal is used to control the pixel to be
substantially completely dark; and (d) outputting the pixel signal inputted to the
defective pixel in step (c) to repair the defective pixel”, as recited in claim 1.

Therefore, the Applicant respectfully submits that *Baldi* fails to disclose, teach or
suggest every element of amended claim 1, and thus the rejection of claims 1, 5, 7 and
8 as being anticipated by *Baldi* under 35 U.S.C. §102(b) should be withdrawn.

It is noted that amended claim 1 incorporates limitations of now canceled claim
2, which has been rejected under 35 USC 103(a) as being unpatentable over *Baldi* and
Suzuki (U. S. Patent 5,289,174). However, even if the teachings of *Baldi* and *Suzuki*
are combined, the claimed invention is not obtained. Moreover, it would not be obvious
to a person skilled in the art to look to the *Baldi* and *Suzuki* references to solve the
problems of the invention, and it would not be obvious to combine the teachings of the
references, even if in the manner suggested on page 9 of the Office Action, regarding
claim 2.

Suzuki discloses:

“A laser beam LB such as a YAG laser beam is emitted from
the undersurface of the matrix array substrate 13 to partially
damage the bus line 9 and insulating film 11, and the damaged bus
line 9 and pixel electrode 4 are short-circuited by the melt of the
bus line 9. Since, therefore, the pixel electrode potential V_p is
equalized with the bias voltage V_{B1} , a pulse voltage of 5 – 4 V is
always applied to the pixel electrode 4. Further, since the potential
 V_{com} of the opposed electrode 7 is 5 V, a pulse voltage of 5 – 4 V is
applied to the liquid crystal layer 8. Since the light transmittance of

the liquid crystal layer 8 is about 1% at -4 V the bright spot defective pixel is changed to a dark spot defective pixel.”
(See col. 5, lines 11-24) (*Emphasis added*)

In *Suzuki's*, a laser beam LB is needed to short-circuit pixel electrode 4 and bus line 9 to change the bright spot defective pixel to a dark spot defective pixel. To the contrary, the present applicant has disclosed an electrical repairing method to replace the conventionally laser-welding repairing method described by *Suzuki*. Therefore, *Suzuki* neither disclose “replacing the pixel brightness signal with a default brightness signal if the pixel signal is used to be inputted to the defective pixel, wherein the default brightness signal is used to control the pixel to be substantially completely dark; and (d) outputting the pixel signal inputted to the defective pixel in step (c) to repair the defective pixel”, as recited in claim 1.

Since features recited in amended claim 1 are not disclosed by *Baldi* and *Suzuki*, the invention defined by amended claim 1 would not be obtained even if *Baldi* and *Suzuki* were combined.

Further, it is noted that *Baldi* discloses that “the method and the device of the invention for compensating for the nonuniformities of intrinsic luminance characteristics of a FED (field emission type) consist in processing the signal that is used for driving the display pixels and will be described in depth by referring to the case of video signals.” (see col. 5, lines 41-45). *Baldi* also discloses “FED technology connects back to conventional CRT technology, in the sense that light emission occurs in consequence of the excitation of the phosphors deposited on a metallized glass screen bombarded by electrons accelerated in an evacuated space. The main difference

consists in the manner in which electrons are emitted and the image is scanned.” (see col. 2, line 40-44) It is well known that the operation of FED (similar to CRT) is quite different from LCD. Therefore, *Baldi*’s method is performed in a very different technical field to solve a different problem than that of the invention, that is, *Baldi*’s method is not in an analogous art.

Suzuki discloses a liquid crystal display device (see TITLE). Because *Baldi*’s and *Suzuki*’s methods are in different and nonanalogous technical fields, it would not have been obvious of to a person skilled in the art the time the invention was made to combine the teachings of *Baldi*’s and *Suzuki*’s methods to obtain the invention defined by amended claim 1 and to solve the problems that have been solved by the invention. Claim 1 and claims 5 and 7 depending therefrom therefore are deemed clearly to be patentable over *Baldi* alone or in combination with *Suzuki*, and the rejection accordingly should be withdrawn.

Moreover, since claim 8 has been amended similarly to the amendment of claim 1 (to include limitations of now canceled claim 9), therefore, for reasons similar to those presented above as to the patentability of claims 1, claim 8 also is deemed clearly to be patentable over *Baldi* alone or in combination with *Suzuki*, and the rejection accordingly should be withdrawn.

The remaining original claims (3, 6, and 10-14), all depending from either claim 1 or claim 8, have been rejected under 35 USC 103(a) as being unpatentable over various combinations of references. These references fail to disclose the features of the invention missing from *Baldi* and *Suzuki*. As such, it is submitted that claims 3, 6,

and 10-14, clearly also are patentable over the prior art of record, and their rejections accordingly should be withdrawn. New claims 15 and 16 respective depend from claim 1 and claim 8. Therefore, these claims as well are deemed clearly to be patentable over the prior art of record.

Therefore, based on the above it is submitted that the application is in condition for allowance and such a Notice, with allowed claims 1, 3-7, 8, and 10-16, earnestly is solicited.

If the Examiner believes that a conference would be of value in expediting the prosecution of this application, the Examiner is hereby invited to telephone the undersigned counsel to arrange for such a conference.

Should any further fee be required, please charge the same to our Deposit Account No. 18-0002 and advise us accordingly.

Respectfully submitted,

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Date



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